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SOME PHASES OF THE MINIMUM WAGE QUESTION

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In taking a bird's eye view of labor legislation since the beginning of the nineteenth century we see that for nearly a hundred years legislators confined themselves chiefly to the regulation of the age and sex of workers, hours of labor, hygiene of factories, and all the other environmental conditions of labor, but made practically no effort to regulate the value of labor, the center and heart of the labor contract.

It is often said that there is no essential difference between the regulation of conditions of employment and the fixing of wages. Mr. Webb says: "Once we begin to prescribe the minimum conditions under which an employer should be permitted to open a factory, there is no logical distinction to be drawn between the several clauses of the wage contract."¹ Professor Taussig appears to take much the same view, when he says: "The demand for legislation establishing a minimum rate of remuneration does not necessarily involve questions of principle different from those considered in the preceding sections; and yet, if pushed to its farthest consequences, it might easily raise a new question."²

However, the qualification made in the latter part of this statement, together with the discussion which follows, shows that Professor Taussig recognizes a distinction in principle between the two kinds of regulation. They are alike in many respects, though fundamentally different. In the one set of phenomena we have, as it were, regulations prescribing the quantity and quality of labor which may be bought and sold; in the other we have an effort to control demand and fix the market price. The former might be compared to the regulation of weights and measures, the grading of wheat and cotton, pure food laws, and other restrictions on freedom in production; the latter is like an attempt to fix prices of wheat and cotton, instead of leaving them to be adjusted by the deep-lying forces of supply and demand, or by the more superficial higgling of the market.

Not only is there this difference in principle between the two forms of regulation, but their effects are different in regard to the

¹ Sidney Webb. "The Economic Theory of a Legal Minimum Wage," *Journal of Political Economy*, Dec., 1912.

² Taussig, *Principles of Economics*, Vol. II, p. 299.

incidence of the burden, when there is a burden. In the case of burdensome regulation of the conditions of labor, there is an increase in the cost of production, and this burden, when the demand for the products of labor is more elastic than the supply of labor, tends to be shifted to the wage earners in the form of a deduction from wages rather than to the consumers in the form of higher prices. Under such circumstances the employers might retain nearly all of their employees, though at lower wages. If, however, the state or a labor union interpose with a minimum-wage regulation, the incidence of the burden is quite different. In that case the employers are prevented from "nibbling" at wages, and, if the burden cannot be borne by the employers nor shifted to the consumers, the employers have no recourse but to reduce production and dismiss some of their employees. In other words, in the case of regulation of environmental conditions, the sellers and buyers of labor can adjust wages according to the quantity and quality of labor offered, but when wages are fixed no such adjustment is possible, and a portion of the supply, usually of inferior grade, is not bought at all.

This is not to say, of course, that moderate regulation of both kinds might not be beneficial, but merely that the one kind of regulation, if carried to excess, would tend to reduce wages, while the other would tend rather to cause unemployment because of the very fact that high wages must be paid. The minimum wage, therefore, is not merely the latest of the long series of common rules, but it is, as Judge Cleeton says, a complementary measure designed to make the other rules effective.³ It is, in fact, the keystone and crown of the whole system; or, to use another analogy, it is a stopper intended to prevent wages in a regulated industry from falling to the level of wages in the unregulated industries round about.

Inasmuch, then, as the employers are prevented from nibbling at wages by the minimum wage rule, and debarred from economizing in other directions by rules controlling hours and other conditions of labor, they are forced to seek relief by closer attention to organization and labor-saving devices, and by requiring greater efficiency on the part of their employees, especially those receiving time wages. If this cannot be done, the employers' only recourse, unless they can bear the burden themselves, is to shift it to the consumers; and this, under conditions of elastic demand,

³ *Stettler vs. O'Hara, et al.*, Supreme Court of Oregon, Mar. 17, 1914, 139 Pac. 743.

must cause reduction of output and dismissal of employees. If, however, advances in wages invariably bring about a corresponding increase in efficiency, there is no burden to shift, and neither increase in prices nor reduction of profits nor dismissal of workers need take place.

The basic assumption of this reasoning is, of course, that there is in any industry a normal wage per unit of efficiency. This normal wage, as Pigou says, tends to be equal to the general level of efficiency wages, although in particular industries it may be temporarily above or below that level.⁴ The unit of efficiency most convenient for our purpose is the efficiency of the poorest laborer in a given group, the better laborers being supposed to receive the wages of the least efficient plus a supplement proportional to their excess of efficiency.⁵ At the point of equilibrium, the wage per unit of efficiency is determined, on the side of demand, by the present worth of the marginal product; and, on the side of supply, by what the marginal laborer must receive to induce him to remain in the group.⁶ The marginal employer, whether at the intensive or the extensive margin, is the least eager or no-profit employer; and the marginal laborer is the least eager or no-surplus laborer. Both are, as Clark puts it, at the margin of indifference, and the slightest change in wages would cause the one or the other to withdraw from the market.

Needless to say, actual wages are never exactly equal to theoretical or normal wages, and this fact has caused many to scoff at theories of wages, to regard the marginal employer as a myth, and to deny the utility of economic fictions. Wages, according to these skeptics, are not fixed by supply and demand, nor by competition among employers and employees, but by custom, tradition, caprice, monopoly, the avarice of the most heartless employer, or the poverty of the most necessitous worker. To take this view is to despair of any rational explanation of economic phenomena and to throw away the clew that might guide the perplexed investigator out of the maze.

Assuming, for theoretical purposes, a normal competitive wage in any group, and a certain elasticity of demand and supply, the conclusion is inevitable that if the wage be artificially raised in the slightest degree the demand for labor will fall off to some extent, and less labor will be employed. This is not to say that

⁴ Pigou, *Principles and Methods of Industrial Peace*, p. 60.

⁵ Moore, *Laws of Wages*, p. 78.

⁶ Taussig, *Principles of Economics*, Ch. 51.

in every case fewer laborers will be employed, for it is conceivable that the lessened amount of employment might be distributed among the same number of laborers, but in most cases some laborers will be dismissed. If all the laborers were of equal efficiency any one or more might be dismissed, but if they were unequal in efficiency the least efficient would be dismissed and the more efficient retained, assuming, for the present, that no change in efficiency took place. At the same time the supply of laborers willing to work at the higher wage would increase, but this would not affect the rate of wages except as it made the minimum hard to enforce.

Various complications are introduced into the calculation when we consider the extent to which wages are raised and the elasticity of supply and demand. If, for example, the minimum is fixed much above the normal, many laborers will be dismissed and many from other groups will be ready to take their places, this on the supposition that both demand and supply are quite elastic. If, however, the demand for labor is very inelastic, a great increase in wages may be made with very little displacement of labor. In such a case the total wages received by the laborers retained might be greater than the total received by all the laborers before the increase took place. There are industries, like the railway business, in which the demand for labor is very inelastic, and there are times in the history of most industries when there is a similar inelasticity of demand, as in agriculture in time of harvest, or in the manufacture of munitions in time of war.

It is not the purpose of the writer to discuss the innumerable combinations and complications due to varying elasticity of supply and demand for labor and the products of labor, variations in time and methods of payment, in efficiency of employers and employees, in the proportions of capital and labor in different industries—and all that—but merely to consider whether the effects of minimum wage legislation have been such as theory has led us to expect; and if not, to indicate what modifications in theory are necessary to make it agree with the facts. Indeed, the complications are so numerous that no merely theoretical discussion of the subject could possibly anticipate all the results. As Mr. Tawney puts it: "The ingenuity of employers and workpeople so greatly exceeds that of economists that discussions of what "must" happen, unsupported by evidence of what has happened or is happening, are usually quite worthless."⁷ Yet, if it is true that theory

⁷ Tawney, *Studies in the Minimum Wage*, No. 1, *Chain-Making*, p. 105.

without experience is worthless, it is equally true that experience without theory is blind.

The experience of New Zealand and Australia is of especial importance, not only because it covers a period of about twenty years, but because it seems to foreshadow the experience through which the United States is likely to pass in the near future. In those countries there are two kinds of minimum wage, a very low statutory minimum, ranging from 2s. 6d. a week in Victoria to 5s. a week in Queensland and New Zealand, designed to prevent the employment of boys and girls as apprentices at little or no wages, and a comfort minimum or standard wage established in numerous trades by arbitration courts and wages boards.⁸ It is only the latter, of course, that is important for our present purpose.

When minimum wage legislation was first passed in New Zealand and Australia, both countries were suffering from a severe depression, during which there was much unemployment, and great distress, especially in the cities, where sweating appeared, a symptom of poverty which the colonies had hitherto scarcely known. Shortly after this a period of prosperity began which has continued with hardly a break until the present time. This extraordinary prosperity has doubtless been due chiefly to two causes: the process of refrigeration, and the rising prices of wool, mutton, and dairy produce.⁹ The value per head of New Zealand's exports in the year 1896 was £13 3s. 9d. (\$64); in the year 1913 it was £21 10s. 2d. (\$104);¹⁰ and Australia's exports show a similar increase. During this period the population of both countries increased considerably, but chiefly by the natural increase, as there was very little immigration. For the Commonwealth of Australia the excess of immigrants over emigrants was only 250,790, of which number 207,816 were added in the years 1911 to 1913; and in Victoria there was an excess of emigrants over immigrants of 60,929.¹¹ These facts, together with the remoteness of New Zealand and Australia from the rest of the world, and the influence of their protective tariffs, throw much light upon the success of minimum wage legislation in those countries.

A notable feature of Australian awards and determinations is

⁸ *Official Year Book of the Commonwealth of Australia*, No. 8, 1915, p. 914. *New Zealand Official Year Book*, 1914, p. 710.

⁹ *New Zealand Official Year Book*, 1915, p. 393.

¹⁰ *Ibid.*, p. 355.

¹¹ *Official Year Book of Australia*, 1915, p. 101.

their moderation. Mr. Aves, comparing average wages of adult males in Victoria in 1900 and 1906, found that in 19 board trades after the determination the aggregate advance was 16.5 per cent on the combined averages; and in 12 non-board trades the aggregate advance was only 11.6 per cent. In regard to female workers the aggregate advance for 6 board trades was 10 per cent, as compared with 8.8 per cent in 12 non-board trades.¹² However, Mr. Collier, comparing average wages in 1900 and 1912, found that for the adult males the average increase had been somewhat greater in the board trades than in the non-board trades, but that the average increase in women's wages had been greater in the non-board trades.¹³ In certain exceptional cases large advances were made by the boards, but as a rule the advances have been very moderate and even conservative in view of the growing prosperity of Australia and the scarcity of labor. Indeed, the minimum wages awarded have frequently not kept pace with competitive wages, as in the case of the builders' laborers in Sydney, who complained that the minimum was largely inoperative, because fixed too low.¹⁴ Similarly, the Arbitration Court of New South Wales refused to fix wages in the boot trade at a higher rate than that fixed by the wages board in Victoria, because of the added burden which such a rate would place on local manufacturers.¹⁵ Mr. George S. Beebe, author of the Act of 1912, under which the New South Wales system now works, expresses the opinion that "much of the general advance in wages and of the general improvement in industrial conditions would have taken place if there had been no Arbitration Courts."¹⁶

Statistics of wages and prices throw some light on the effects of legal regulation, but, as Professor Hammond has well shown, they must be used with caution.¹⁷ According to the *New Zealand Year Book* of 1908, average wages increased from 1895 to 1907 by 23 per cent, while the price of food increased by 22.5 per

¹² Aves, *Report on the Wages Boards and Industrial Conciliation and Arbitration Acts of Australia and New Zealand*, p. 30.

¹³ P. S. Collier, "Minimum Wage Legislation in Australia," *New York State Factory Investigating Commission*, 1915, p. 1894.

¹⁴ F. A. A. Russell, "Industrial Arbitration in New South Wales," Paper read before Section F of the British Association, Sydney, 1914, *Economic Journal*, Sept., 1915.

¹⁵ *Official Year Book of Australia*, 1915, p. 899.

¹⁶ Geo. S. Beebe, "The Artificial Regulation of Wages in Australia." *Economic Journal*, Sept., 1915.

¹⁷ M. B. Hammond, "Wages Boards in Australia," *Quarterly Journal of Economics*, May, 1915.

cent.¹⁸ Later and more careful investigations show that prices of food and rent in Auckland, Wellington, and Dunedin increased on the average 16.5 per cent from 1895 to 1907, and by 24.1 per cent from 1895 to 1913,¹⁹ but no corresponding statistics of wages are available.

The following tables show the variations in nominal and effective wages in Australia from 1901 to 1914.²⁰

VARIATIONS IN NOMINAL WAGE INDEX NUMBERS IN DIFFERENT STATES,
1901 TO 1914

(Weighted Average Wage for Commonwealth in 1911 = 1000)

Particulars	1901	1906	1907	1908	1909	1910	1911	1912	1913	1914	Notes
New South Wales }	858	886	910	913	942	968	1003	1058	1088	1096	{ Arb. Court establ. 1901 Wages Boards establ. 1908
Victoria . .	796	807	857	871	887	924	985	1038	1058	1065	{ Wages Boards, 1896
Queensland .	901	909	914	925	946	960	997	1010	1027	1042	{ Industrial Boards, 1908
South Australia }	819	832	858	868	905	951	1013	1048	1061	1062	{ Arb. Court, 1910
Western Australia }	1052	1053	1053	1061	1068	1116	1152	1191	1214	1226	{ Arb. Court, 1912
Tasmania . .	719	749	725	725	732	772	799	934	1025	1028	{ Wages Boards, 1910
Commonwealth }	848	866	893	900	923	955	1000	1051	1076	1085	{ Arb. Court, 1904

Note.—The figures in the above table are comparable both horizontally and vertically.

VARIATIONS IN EFFECTIVE WAGES IN EACH STATE AND COMMONWEALTH,
1901 TO 1914

Particulars	1901	1906	1907	1908	1909	1910	1911	1912	1913	1914
New South Wales	961	949	983	926	952	973	973	922	924	909
Victoria	915	919	979	941	980	981	1037	981	1007	964
Queensland	1172	1165	1151	1081	1112	1095	1090	1032	1060	1045
South Australia	948	934	960	911	914	943	957	906	947	929
Western Australia . . .	1024	1029	1068	1060	1081	1091	1023	1032	1076	1073
Tasmania	827	833	818	788	769	812	838	896	976	943
Commonwealth	964	960	996	946	974	985	1000	955	975	952

Note.—Each of the years in which effective wages declined—1908, 1912 and 1914—were years of severe drought, when there was a rapid increase in cost of living.

¹⁸ Year Book, 1908, p. 539.

¹⁹ Report of Commission on the Cost of Living in New Zealand, 1912. New Zealand Official Year Book, 1915, p. 780.

²⁰ Official Year Book of Australia, 1915, pp. 1003-1011.

It is interesting to compare these figures with index numbers of real wages in the United States and England prepared by I. M. Rubinow and Frances Wood.

Year	Index of Real Wages in the United States ¹	Index of Real Wages in England ²
1901	96.8	100.9
1902	94.3	97.9
1903	97.3	96.3
1904	96.0	93.3
1905	98.6	92.5
1906	98.0	94.3
1907	97.7	94.3
1908	93.0	87.4
1909	89.4	87.0
1910	87.2	90.4
1911	88.9	94.3
1912	85.3	94.3
1913	85.3	
1914	84.3	
1915	85.3	

¹ I. M. Rubinow, "The Recent Trend of Real Wages," *The American Economic Review*, Dec., 1914. The figures for 1913-1915 were prepared by Professor Minnie T. England from the sources used by Dr. Rubinow.

² Frances Wood, *Journal of the Royal Statistical Society*, Vol. 72, p. 103; Vol. 77, p. 37.

In comparing these different sets of figures with one another, one is tempted to guess that legal regulation in Australia, although it has advanced real wages very little, if at all, has at least tended to make money wages keep pace with the rising cost of living; whereas in the United States and England they have lagged behind. This conclusion, however probable it may be, is far from certain, as one does not know how much weight to allow to the growth of Australian trade, the scarcity of labor, and other important factors in the situation.²¹

It is generally admitted that sweating has practically disappeared in Australia and New Zealand during the period of legal regulation, but this effect cannot be attributed solely to the work of the courts and boards. Industrial conditions were abnormal in the middle nineties, and, as prosperity came, sweating and other symptoms of poverty tended to disappear. But there is still much poverty, and a recrudescence of sweating and kindred evils might

²¹ A. C. Pigou, *Wealth and Welfare*, Part III, Chaps. 7, 12. "The Principle of the Minimum Wage," *Nineteenth Century*, March, 1913.

J. B. Clark, *Atlantic Monthly*, Sept., 1913.

be expected from time to time were it not for legal regulation. As late as the year 1908, which was a year of drought, it was found that in the workrooms in the Sidney district no less than 514 girls were in receipt of less than 4s. a week; but this was prohibited by the Minimum Wage Act of that year.²²

The fixing of minimum wages seems to have reduced the number of home workers in Victoria, at first. Hammond attributes this in part to the fact that piece-work rates were fixed on a basis higher than the time rates in factories.²³ The improvement of methods of production in factories has, of course, the same tendency. On the other hand, the fixing of high time rates for factories should encourage home work. According to the *New Zealand Year Book*, sweating has almost disappeared through the restriction of subcontracts.²⁴ Again, the number of outworkers—not necessarily sweated workers—has increased in Victoria in recent years.²⁵ This may have been due in part to the scarcity of factory workers, and in part to a stricter enforcement of the law providing for the registration of outworkers.

There is general agreement among investigators that more or less displacement of labor has frequently followed advances in wages, although not to the extent that had been expected, and in almost every case the decline was only temporary. Mr. Collier says: "After the period of adjustment, industry pursued its normal course. This is partially accounted for by the fact that the labor market, especially for skilled workers, has been quite active in recent years."²⁶

Numerous instances might be cited in confirmation of the foregoing statements. After the boot trade award of 1898 in Victoria, one manufacturer stated that he had dispensed with 70 or 80 hands out of a staff of 280, and others made similar complaints, and even the chief Factory Inspector admitted that the minimum had been placed too high.²⁷ A determination by the Hairdressing Board of Victoria had the effect of closing some of the smaller shops and throwing 70 men out of employment.²⁸ On

²² *Official Year Book of Australia*, 1915, p. 924.

²³ Hammond, "Wages Boards in Australia," *Quarterly Journal of Economics*, Vol. XIX, p. 569.

²⁴ *New Zealand Official Year Book*, 1914, p. 710.

²⁵ P. S. Collier, *Minimum Wage Legislation in Australasia*, p. 1877.

²⁶ Collier, *op. cit.*, p. 2243.

²⁷ Hammond, *op. cit.*, p. 585.

²⁸ *Ibid.*, p. 603.

the other hand, in certain trades, as baking and butchering, the determinations seem to have caused the multiplication of small shops employing no hired labor. In the furniture trade the determinations caused some substitution of Chinese for European workers, because they could not be enforced in Chinese shops. There was much unemployment in Victoria from 1898 to 1902, partly, if not chiefly, because of the drought, but a parliamentary Board of Inquiry in 1900 mentioned minimum wage legislation among the causes of the trouble.²⁹ After 1902 there was very little complaint on that score, for since that time Victoria and the commonwealth as a whole have had a practically unbroken career of prosperity.

It is the old and slow workers who have been the first to suffer displacement and the last to be reemployed, especially when wages were paid by time rather than by the piece. For their benefit a system of special permits has been devised, which, however, has not proved very satisfactory, either to the workers or to the employers. They tend, therefore, as Professor Hammond says, to drift out of the trade altogether to add to the number of unskilled workers, or to endeavor to carry on work in their own homes.³⁰

There is not much evidence at hand concerning the displacement of men by women, women by men, adults by young persons, or young persons by adults; but such as there is goes to confirm that theory that a high minimum for men tends to encourage the employment of women, while a high minimum for women favors the employment of men. Similarly, a high minimum for adults causes the employment of young persons, and these, again, are apt to be dismissed on reaching the age which would qualify them for the legal rate for adults.³¹ Again, the high wages awarded to relatively unskilled laborers have encouraged young men to enter those occupations; and, as Mr. Beebe says, the result has been a serious restriction in the production of new mechanics.³²

The statistics of unemployment in Australia throw little light on the effects of wage regulation, except as indicating that no serious results have followed. The following table gives the percentages of union members reported as unemployed at the end of each year.³³

²⁹ Collier, *op. cit.*, p. 1903.

³⁰ Hammond, *op. cit.*, p. 589.

³¹ Aves, *Report on Wages Boards and Industrial Conciliation and Arbitration Acts of Australia and New Zealand* (London, 1908), pp. 61, 177.

Hammond, *op. cit.*, pp. 591-594.

³² Geo. S. Beebe, *Economic Journal*, Sept., 1915.

³³ *Official Year Book of Australia*, 1915, p. 1000.

Year	Per cent of Union Membership Unemployed	Year	Per cent of Union Membership Unemployed
1891	9.3	1911	4.7
1896	10.8	1912	5.5
1901	6.6	1913	5.3
1906	6.7	1914	5.9
1907	5.7	1st Quarter	5.7
1908	6.0	2nd " "	10.7
1909	5.8	3rd " "	11.0
1910	5.6	4th " "	

Another table gives the percentages of union members unemployed in the several states at the end of the years 1913 and 1914.³⁴

	Per cent of Union Members Unemployed at End of the Year	
	1913	1914
New South Wales	4.5	6.9
Victoria	5.8	14.1
Queensland	4.4	17.7
South Australia	8.7	13.8
Western Australia	4.7	8.6
Tasmania	4.9	18.3
Commonwealth	5.3	11.0

Without full knowledge of conditions in every state, one would be unwarranted in drawing any conclusions from these figures as to the effects of wage regulation, but it is worth noting that Tasmania, the latest state to establish wages boards, and the state in which wages have been advanced most in recent years, has suffered most from unemployment in the first months of the war.³⁵

The experience of Australia and New Zealand does not confirm the opinion that the fixing of minimum wages tends to increase the efficiency of labor. On the contrary, the general opinion is that efficiency has declined in recent years. The climate, the Australian temperament, the scarcity of labor, and the "go easy" policy of the unions might fully account for this, yet Mr. Beebe says: "I have been forced to the conclusion that our experiments have not added to efficiency, but have had a contrary effect,

³⁴ *Ibid.*, 1914, p. 991; 1915, p. 1001.

³⁵ Cf. Collier, *op. cit.*, pp. 2199, 2247.

mainly owing to fixing of standard wages instead of minima, and to the failure of our courts to popularize payment by results, with reasonable safeguards against sweating or undue speeding up."³⁶ Mr. Beebe further says, in discussing the general problems of regulation in New South Wales:

The conviction is growing, even in industrial circles, that we have nearly reached the limit of artificial regulation of wages, and that with the increased cost of commodities, traceable to higher wages, we are moving in a vicious circle. The worker begins to realize that while minimum wages and conditions are necessary and useful up to a certain point, they react and hamper enterprise when they go beyond the point of preventing men with limited capital from entering the field. . . . I think that the day is not far distant when we shall abandon our present elaborate system of compulsorily legalized contracts, and substitute in its place four enactments:

1. The appointment of a Board of Trade to prescribe a national minimum wage from time to time.
2. The fixing of a universal Eight Hour Day, with certain recognized exceptions.
3. The creation of a system for the apprenticeship and industrial education of boy labour.
4. A special Act relating to the hours of labour and minimum wages of females.

Subject to these regulations, I believe the old economic forces will again come into play, and that education, with the maintenance of easily accessible tribunals for arbitration, will lead to industrial peace far more rapidly than the compulsory laws with which we have been experimenting.

The experience of Great Britain in minimum wage legislation is even more important, from the American point of view, than that of Australia and New Zealand. Mr. Tawney's admirable studies of the chain-making and tailoring industries give more detailed information than any investigations of Australian conditions, but the general results, notwithstanding certain local variations, show a strong resemblance to those observed on the other side of the world.

The determinations of the Trade Board for the Chain-Making Trade went into effect in February and August, 1911, when the trade was recovering from one of its severe depressions. Since then, as Mr. Tawney says, the trade has experienced a period of quite unusual activity.³⁷

³⁶ Geo. S. Beebe, *Economic Journal*, Sept., 1915.

³⁷ R. H. Tawney, *Studies in the Minimum Wage*, No. 1, *Chain-Making* (London, 1914), p. 70.

The board fixed both minimum time rates and minimum piece rates. The minimum time rates were fixed at 2½d. per hour for hand-hammered chain, the women's section, and 5d. to 7d. per hour for dollied or tommied chain, the men's section. The increase in minimum piece rates varied from 9.9 per cent in one grade of chain to 68 per cent in another, the average of the median increases being 35.04 per cent.³⁸ Mr. Tawney states that both men and women have at certain times in the past been paid on a higher list than that fixed by the board.³⁹ There has evidently been a good deal of evasion of the determinations, and the increase in earnings appears to have been due as much to the increased volume of work as to the minimum rates. Weekly earnings have increased considerably, the mode for women being between 5s. and 7s. in 1913, as compared with 4s. and 5s. in 1910.

The poverty of the workers before the determinations must, one would think, have interfered seriously with their efficiency. As one worker said: "One cannot make chain on bread and tea." Still, the evidence seems to show that the laborers work more slowly when they are better paid, although they make a better quality of chain. There is no "speeding up," or other improvement in organization, as most of the work is done outside of factories, and machinery is little used.

In this trade wages form a large proportion of the cost of production. Prices have been raised from 23 per cent to 41 per cent, although the actual increase is not equal to this, as the quality has improved. The demand for chain has been so active that the manufacturers have had little trouble in shifting the burden to the consumers.

There has been no decrease in the number of workers. On the contrary, there has been more employment than at any previous time. The only people injured have been the middlemen, some of whom were parasitic subcontractors, whose work consisted chiefly in beating down wages. These have been largely eliminated, while the position of the useful shop-owners has been weakened.

The purpose of the determinations, however, was not to preserve the middlemen, but to raise the standard of life of the worst paid sections of workers. Mr. Tawney says: "What exactly the effect of the Trade Board will be in a time of bad trade, it is, as yet, too soon to determine."⁴⁰

³⁸ *Ibid.*, p. 74.

³⁹ Tawney, *op. cit.*, p. 65.

⁴⁰ Tawney, *op. cit.*, pp. 70, 104.

In the tailoring trade it was thought impracticable to fix minimum piece rates, so the Trade Board established a minimum time rate of $3\frac{1}{4}$ d. an hour for women workers and 6d. an hour for men, the rates to become obligatory in February, 1913.⁴¹ The minimum for men was too low to have much effect, except in certain places, as few men earned less than 6d. per hour. Very soon, too, the minimum ceased to be operative in the north of England, as in Leeds, where the growth of business caused the wages of women to rise to 4d. an hour, and the wages of men to $8\frac{1}{4}$ d., $8\frac{3}{4}$ d., and $9\frac{1}{4}$ d.⁴² One of the serious difficulties in the way of fixing minimum piece rates was that a piece rate which would assure workers in a good factory fair time wages would mean starvation wages to outworkers; while a rate sufficient for outworkers would discriminate against factory production.⁴³ Piece rates were frequently much higher in the south of England than in Yorkshire, although time wages were far lower. Mr. Tawney tells of some workers from Yorkshire who had visited an exhibition of sweated clothing held in London, and went home saying: "We wish we were paid the same price as sweated workers."⁴⁴

The minimum time rates, low as they were, would, if they had been strictly enforced, have provided an increase in wages to at least 38 per cent of the women piece-workers and about 25 per cent of the men workers in the branch of the industry affected by the determinations. Inasmuch, however, as there has been a good deal of evasion, it is impossible to determine accurately the extent of the improvement. Besides, there is no way of separating the results of the determinations from the influence of the unusual activity of trade.⁴⁵

In the tailoring trade wages form from a quarter to a third of the cost of producing clothing. The cost of materials is far more important, and the prices of these have been rising. An advance in wages, then, of 10 per cent, should involve an advance in the price of clothing of not more than $2\frac{1}{2}$ to $3\frac{1}{3}$ per cent.⁴⁶ However, there has been no appreciable rise in prices, although there

⁴¹ R. H. Tawney, *Minimum Rates in the Tailoring Industry. Studies in the Minimum Wage*, No. 2 (London, 1915), pp. 33, 64.

⁴² Tawney, *op. cit.*, p. 101.

⁴³ *Ibid.*, p. 199.

⁴⁴ *Ibid.*, pp. 135, 144.

⁴⁵ *Ibid.*, chaps. 3 and 8.

⁴⁶ *Ibid.*, p. 100.

has probably been some decline in quality, and there is no evidence that England's exports of clothing are falling off.⁴⁷

As in the chain-making business, the increased cost of doing business has been hard on the least efficient employers. "Some of the firms paying the lowest rates of wages have lost part of their trade, and some of the subcontractors have had their profits reduced."⁴⁸ There has been a tendency toward "speeding up," toward a more careful training of workers and improvement of processes and equipment.⁴⁹ In some cases this has gone so far as to put an undue strain upon the workers, who are threatened with dismissal if they do not earn the minimum. Mr. Tawney says: "So great are the opportunities for skilful organization offered by most modern machine industries, so much are they neglected when employers can pay any wage they please, and so potent are the effects of the erection of a standard to which they must conform, that the establishment of minimum rates has been followed, at least in the tailoring industry, by a general increase of efficiency both among workers and manufacturers."⁵⁰

In regard to the dismissal of workers the experience of Australia has been repeated in England. Certain workers have been dismissed, on the ground that they were not worth the minimum, but the number was not large and many of those at first dismissed regained work almost immediately.⁵¹ There has been some reduction in the number of home-workers, usually middle-aged or elderly women, of whom about two-thirds are married, one-tenth single and the rest widows.

As in Australia, the fixing of minimum wages tends to discourage the employment of adult apprentices, as they must receive the full minimum after twelve months' learnership. It tends also to discourage the employment of learners between fourteen and eighteen, as they must be paid minima varying with age and experience. The minimum, then, appears to discriminate chiefly against two classes of workers—the learners at one end of the age scale and the old and slow workers at the other. Those who are most protected, therefore, are those who are best able to take care of themselves.

As in the chain-making trade, the experiment in the tailoring

⁴⁷ *Ibid.*, p. 105.

⁴⁸ *Ibid.*, p. 254.

⁴⁹ *Ibid.*, p. 142.

⁵⁰ *Ibid.*, p. 160.

⁵¹ *Ibid.*, p. 254.

trade has been tried in a time of expanding demand and rising prices. Mr. Tawney says: "The clothing trade as a whole has been exceptionally active during the past twelve months, and its prosperity has not suffered from the establishment of minimum rates by the Trade Board. When trade begins to fall off there will, no doubt, be the usual growth of unemployment."⁵²

The experience of the United States in minimum wage legislation is of the first importance as a guide to future action, but it has been too recent to throw much light on the question.⁵³ Minimum wage laws have been passed in eleven states, but only Massachusetts, Oregon, and Washington have made any serious attempt to put the Victorian system into operation.⁵⁴

In Oregon, the minimum wages in retail stores were fixed at \$6 for girls under eighteen and inexperienced adult women, \$9.25 for experienced adult women in Portland, and \$8.25 for experienced adult women in other parts of the state. As a result of this the wages of a considerable number of adult women and of girls were raised to the minima, although average weekly wages in the 40 retail stores investigated increased but slightly—from \$9.92 to \$10.33—and the average weekly wages of adult experienced women increased still less—from \$11.62 to \$11.85.⁵⁵

During the same period—March and April, 1913, to March and April, 1914—the total number of adult inexperienced women employed in the 40 stores decreased about 21 per cent in actual numbers, but only 13 per cent in possible full-time numbers; and the number of adult experienced women decreased by about 10 per cent in actual and 9 per cent in equivalent full-time numbers; while the number of girls under eighteen increased by about 16 per cent in actual numbers and 15 per cent in possible full-time numbers.⁵⁶ It should be remembered, however, that Oregon, as well as the whole Pacific Coast, was suffering from a severe business depression in the year 1914. The fact that sales decreased by 8 per cent while the number of full-time workers of all classes decreased by 11 per cent, shows that there probably would have

⁵² *Ibid.*, p. 167.

⁵³ Report of Alexander J. Porter, Chairman Minimum Wage Commission. The National Civic Federation, Washington, 1916.

⁵⁴ "Minimum Wage Legislation in the United States and Foreign Countries." *Bulletin of the Bureau of Labor Statistics*, No. 167 (Washington, 1915), p. 31.

⁵⁵ "Effect of Minimum Wage Determinations in Oregon," *Bulletin of the Bureau of Labor Statistics*, No. 176 (Washington, 1915), pp. 18, 22.

⁵⁶ *Ibid.*, p. 37.

been much dismissal of workers without the minimum wage determinations.

While there was no marked displacement of women by men in the Portland stores, where business decreased the number of men decreased less than the number of women; and where business increased there was a greater increase among men than women.⁵⁷ There was also a tendency to employ girls under eighteen instead of adult inexperienced women, and girls of sixteen were preferred, as they might work for two years at \$6 a week. There was also some tendency for women to change their occupations after one year, in order to be classed as inexperienced workers for another year.⁵⁸

The employers as a whole do not seem to have had any serious complaint to make. They cut down their force more than the volume of their sales and retained their most efficient workers; and while they were obliged to raise the wages of some of their women workers, they seem to have made up for that by demanding more service of all. Their total labor cost increased on the average by only 3 mills per dollar of sales.⁵⁹

The experience of Washington has, apparently, been very similar to that of Oregon. Minimum wages have been fixed at \$9 for experienced women workers in laundries, telephone service, hotels, and restaurants at \$8.90 in manufactures, and \$10 in mercantile industries and general office occupations. There is a flat wage of \$6 for all minors, and a provision for apprenticeship licenses and licenses for defective or crippled workers, permitting them to work for less than the minima.⁶⁰

There has been some dismissal of inexperienced workers, but less than one would expect, considering the high rates and the depressed condition of business. Of course, the standard of wages is higher on the Pacific Coast than in the eastern states. Then, too, the Pacific states are similar to Australia and New Zealand in that they are remote from the great centers of population and lead an industrial life of their own, largely protected from outside competition. There are, in fact, two classes of industries: those which, like laundries and hotels, are effected slightly, if at all, by outside competition; and another class, like the manufac-

⁵⁷ *Ibid.*, pp. 12, 38.

⁵⁸ *Ibid.*, pp. 8, 16, 23, 40, 46.

⁵⁹ *Ibid.*, pp. 16, 68.

⁶⁰ State of Washington, *First Biennial Report of the Industrial Welfare Commission* (Olympia, 1915).

turing of clothing and candy, which come into direct competition with eastern products. Some of the latter class, as the commissioners state, "have had some difficulty in adjusting themselves to the new conditions. This situation is frankly admitted, and it will continue to exist until the sweat-shops of the East are compelled, through similar laws, to pay similar wages."⁶¹

The following statements are taken from letters which the writer has received from several of the leading merchants of Seattle.

Mr. S. Booth, superintendent of the Fraser-Paterson Co., says: "We believe we get more efficiency from the \$7.00 and \$8.00 girls after they have been raised to \$10.00. They seem happier, more interested, and, no doubt, are more ready to boost for their store. In other words, they are removed from the danger line of want, and the difference makes for happiness. We consider the minimum wage law an excellent thing for the employer, as all stores are placed on an equal footing, and the entire wage controversy is taken from the dominion of organized labor."

Mr. Geo. C. Pratt, store manager of the Bon Marché, says: "The increased wage is attracting a higher type of employee, which is demonstrated by the fact that the personnel of our store has shown a marked improvement during the past two years, thereby insuring us greater efficiency."

Mr. J. C. Black, of the Black Manufacturing Co., says: "The class of our labor is such that the minimum wage makes practically no difference with us at all. We do find, however, that it absolutely eliminates all chance of inefficient or semi-efficient girls getting permanently placed."

McCormack Bros. write: "One is apt to demand efficiency when paying the minimum scale and in this way get along with a little less of the cheap and less capable help."

Mr. J. S. Williams, of the Williams Garment Co., says: "The minimum-wage law has been a help to us, as we have been compelled to let out poor help because they cannot earn the minimum. We like the change, but it makes it hard on the woman who needs work, but cannot earn the wage."

Frederick & Nelson write: "We wish to state that after two years of operation, we have found the minimum wage to be entirely satisfactory. It has had no bearing on the number of people employed, and has increased the efficiency of those employed and those seeking employment to a great extent."

⁶¹ *First Biennial Report*, p. 14.

The experience of Massachusetts, when it has been thoroughly observed and analyzed, should throw more light on the minimum wage question from our point of view than that of any other state or country that has tried the experiment. Decrees have been made for the brush industry (1913), confectionery, and laundries (1914), retail stores, corset industry, and paper box industry (1915), and women's clothing industry (1916).⁶²

The decree for the brush-making industry, which became effective on August 15, 1914, fixed a minimum of $15\frac{1}{2}$ cents an hour for all experienced females, whether adults or minors, and a rate for learners of 65 per cent of the minimum, the period of apprenticeship to be not over one year. Reports of the success of the regulation are very conflicting. The report of the commission states that the decree has worked fairly well, but admits that the industry suffered at first because of the disturbance created by the war and because of the failure of the European supply of bristles. When the supply of bristles had been restored, the general business depression injuriously affected the demand for brushes. However, the industry revived in the spring of 1915, and by June it had regained normal conditions. The increase in wages has been large; the capital invested and the value of the products have increased; the employment of women has not given way to that of men; nor has the minimum tended to become the maximum. From 1913 to 1915 there was no reduction in the number of female workers, but the number of male workers decreased from 472 to 417.⁶³

A pamphlet recently published by the Executive Committee of Merchants and Manufacturers of Massachusetts gives quite a different account of the effects of the decree on the brush industry. Mr. Lew C. Hill, President of the John L. Whiting-J. J. Adams Co., stated in January, 1916, that the number of women and minor workers employed by their firm declined from 397 in September, 1913, to 202 in September, 1915, and that there was also a decrease in men workers, involving a total loss in one week's wages of \$1237.76. Mr. Hill stated further that the manufacture of lowest-priced and many medium-priced brushes, which are the kind most largely used, had stopped in Massachusetts,

⁶² State of New York, *Third Report of the Factory Investigating Commission* (1914), p. 304.

⁶³ *Report of the Minimum Wage Commission*, Boston, 1916. "Effect of the Minimum Wage Decree on the Brush Industry in Massachusetts," *Bulletin* No. 7, Minimum Wage Commission (Boston, 1915).

and that they were now made elsewhere. He said that the demand for brushes had been enormous, because of the war, and that the manufacturers of Massachusetts could not compete with those of other states, because of the minimum wage. "The principle of obliging manufacturers to pay \$8.37 to workers of only \$5 or \$8 earning capacity has resulted in complete idleness for those who are prevented being paid what they can earn."⁶⁴

The committee who prepared this pamphlet claim that much unemployment has been caused by the decree of the commission relating to retail stores, amounting to as much as 10.7 per cent of the number of girls employed in the large department stores of Boston. Altogether, they claim that the minimum wage has had a bad effect on the industries to which it has been applied, and they desire to have it repealed, or, if there must be a minimum wage, that it be established for all the states by the federal government. Mr. Hill, on the other hand, would have the minimum wage law applied to three or more of the larger manufacturing industries employing women in Massachusetts, in order that practical knowledge of its effects might be obtained as soon as possible.

From the foregoing review of the effects of minimum wage legislation, especially in relation to unemployment, it is evident that it has seldom, if ever, had the disastrous results predicted by many business men and some economists. The anticipated results have occurred, but not in the degree expected. The cost of production has frequently risen, but not as much as the rise in wages. Marginal employers have suffered more or less, but other employers have been able to carry on business without much, if any, restriction in output or increase in prices. Some employees—at times a good many—have been dismissed, but after a while, as trade expanded, most of them have been reemployed, and no considerable residue of unemployables has been created.

In explanation of these facts one possibility is that actual wages do not equal theoretical, normal wages, but are usually below the normal, at least in a time of rising prices.⁶⁵ If this is true, as seems probable, there is some exploitation of labor when prices and profits increase but wages lag behind. As Taussig says: "Those business men gain most in periods of rising prices whose operations involve in largest degree the payment of

⁶⁴ *The Minimum Wage, a Failing Experiment.* Published by the Executive Committee of Merchants and Manufacturers of Massachusetts (Boston, 1916).

⁶⁵ Pigou, *Wealth and Welfare*, Part III, Ch. 2. Pigou, "The Principle of the Minimum Wage," *Nineteenth Century*, March, 1913.

wages."⁶⁶ In such a case the action of a labor union, in forcing wages up to the normal, might benefit the laborers directly concerned, by merely taking up the slack, without any reduction in the volume of business or any increase of prices to the consumers. Similarly, the action of the state, through wages boards or arbitration courts, might have the same effect. Here we have a substitute for unionism, the state acting as selling agent for labor, especially unorganized labor, and trying to sell that labor at its full market value. Of course, in a time of falling prices, actual wages might be considerably above the normal, and it might be necessary for the state to fix maximum instead of minimum wages. It may be such a consideration as this, among others, which led Mr. Gompers to say, in regard to the minimum wage proposal: "I fear the Greeks, even when they bring gifts."

Another explanation of the slight dismissal of workers following advances in wages may be found in the fact that the demand for labor is often quite inelastic. This may be due to inelasticity of demand for the products of labor, as in the case of coal and milk, or to inelasticity of the demand for labor itself, because of the necessities of the employers, as in the case of agricultural labor in time of harvest. In the former case any considerable advance in wages would probably be shifted to the consumers; in the latter case there might be no advance in prices, as all of the burden might be borne by the employer or shifted backward to the farmer and the landowner. In either case there might be a considerable increase in wages without much dismissal of labor, although in the long run the demand for labor might fall off, or expand more slowly than it should.

Closely connected with this explanation is the fact that minimum wage legislation in Australia and New Zealand has been tried in a time of expanding trade and rising prices, when the demand for labor was increasing more rapidly than the supply. Then, too, the advances in wages have usually been very moderate, and in some cases the current rates of wages have advanced beyond the minima granted by the boards and courts. Similarly, in the chain-making and tailoring industries of Great Britain, the success of the determinations has been largely due to the prosperity of these industries. The experiment in these countries has been tried under the most favorable circumstances, and it remains to be seen whether it will stand the test of a prolonged industrial depression or a time of falling prices.

⁶⁶ Taussig, *Principles of Economics*, Vol. I, p. 305.

Finally, it may be that the fixing of minimum wages has acted as a stimulus to both employers and employees in the direction of greater efficiency. When wages are advanced, as when the price of materials rises, the employer's burden is increased; and if he cannot shift it to his customers he is likely to demand more service of his employees, or to adopt labor-saving machinery, improvements in organization and discipline, and other devices for reducing cost. Mr. Webb says: "The enforcement of the Common Rule on all establishments concentrates the pressure of competition on the brains of the employers and keeps them always on the stretch."⁶⁷ Professor Pigou says: "In the last resort, however, mechanical analogies must give way to biological. For, an artificially increased wage rate may indirectly influence the quality and general efficiency of workpeople."⁶⁸ Mr. Tawney says: "Economic processes are not reducible to sums in simple arithmetic. The reaction which follows an increase or reduction in wages is not merely quantitative, but qualitative. Hence all forecasts are necessarily and invariably fallacious. The premises are not stable, they are modified by the consequences. There is more in the result than appears in the components, an unknown factor whose operation defies deductive reason. In warfare, to take an analogous case, that unknown factor which decides campaigns in defiance of military logic is the spirit of the army. In industry the unknown factor is the character of the workers and the character of the management."⁶⁹

This is the crux of the whole question. If the raising of current wages to some higher minimum produces a corresponding increase in efficiency, then, provided that the demand for labor is sufficiently elastic, there need be no dismissal of workers, as the amount paid per unit of efficiency is no greater than before, and may even be less. However, the evidence is by no means convincing on this point, but is rather conflicting. It is clear that the fixing of minimum wages causes the selection of the more efficient workers, but it is not so clear that it increases the efficiency of those previously inefficient. Those industries and those states in which a minimum has been established may obtain the pick of the workers, but the old and slow and otherwise subnormal workers may be as incapable as before, and their competition may lower the wage-

⁶⁷ Sidney Webb, "The Economic Theory of a Legal Minimum Wage," *Journal of Political Economy*, Dec., 1912.

⁶⁸ Pigou, *Principles and Methods of Industrial Peace*, p. 47.

⁶⁹ Tawney, *Minimum Rates in the Tailoring Industry*, p. 120.

level in unregulated industries and states. Only by fixing minima in all industries and in all parts of the country could the effects on efficiency be brought to light. On general principles one would think that a scale of wages based on units of efficiency running from some low to some high point, with suitable provision for promotion, would do more to encourage efficiency than a high minimum offering the simple alternative of wages or no wages.

The employers, too, in these times of progress and keen competition, are already under a heavy strain, and it is a question whether a new stimulus will goad them to further effort or force them out of the game. As Taussig says: "The proposition that heavier burdens necessarily develop greater strength is highly disputable."⁷⁰ At any rate, the marginal employer, as all admit, is unable to keep up the pace, and business tends to be concentrated in the hands of the more efficient firms. This shows that the increase in the workers' efficiency is frequently not equal to their increase in wages, and that the added burden, when it is not shifted to the consumers, falls on the more efficient employers, since they alone survive. This is not to say that the more efficient employers will pay the workers more than they are worth, but only that they will make less profit than they did before.

While the minimum wage has not produced in any country the disastrous consequences predicted on merely theoretical grounds, there can be no doubt, in view of all the evidence, that in itself, other things being equal, it does tend to limit marginal applications of labor and to cause the dismissal of the least efficient workers, and that the higher the minimum is fixed the stronger does this tendency become. The fact that other things are not equal, and that some beneficial tendencies may be set in operation by the minimum wage, does not wholly counteract its dangerous tendency, which, under less favorable conditions, might do more harm than good to the very persons who most need its help.

Probably the best result of the minimum wage movement is that it has called the attention of all concerned to the need of efficiency on the part of both employers and employees, and on the best methods of improvement in this respect. Whether we like it or not, employers pay wages not according to need but according to service, and if the demand for labor is to go on increasing, there must be a minimum of service rendered for a minimum wage. The

⁷⁰ Taussig, "Minimum Wages for Women," *Quarterly Journal of Economics*, May, 1916.

present situation calls for something more than a crude minimum wage for all workers of a certain age and experience; it calls for some sort of apprenticeship, for vocational training, for classification of workers, for remuneration according to service, for a proper system of promotion, and for a greater degree of security and permanence in employment. Whether all this will come about through the efforts of the parties directly concerned or by the agency of the state the future will show; but if the minimum wage movement had done no more than call attention to these needs it would not have been in vain.

It is common to decry the mediaeval regulation of wages in England under the Statutes of Laborers and similar laws, but there is good reason to think, with Mr. Lipson, that this maximum wage legislation served in some degree to check the rise in wages and to repress the aspirations of the working class.⁷¹ If, therefore, the state, supported by a tacit or confessed conspiracy of the employing class, could keep wages down; it may be inferred, with some show of reason, that a state friendly to the wage-earners and supported by organized labor, could do something in the way of reinforcing the bargaining power of labor and pushing wages up. There are limits to the power of the state in both directions, and dangerous pitfalls on every side; but if voluntary effort on the part of employers and employees cannot solve the wages question, the state should try to do it, that all normal workers may receive at least a living wage, and all employers a minimum of service which will be worth that wage.

⁷¹ E. Lipson, *The Economic History of England* (London, 1915), pp. 93, 348 *seq.*